SOUTHERN UNIVERSITY
AND AGRICULTURAL & MECHANICAL COLLEGE

Purchasing Department

Purchasing Department
P.O. Box 9534
Baton Rouge, LA 70813
Phone: (225) 771-4580
Fax: (225) 771-2026

Addendum Number 1

January 24, 2022

PARKING LOT
M.A. Edmond Livestock Arena
Ag Research Center
Southern University and A&M College
Baton Rouge, Louisiana 70813

Bid # 10300 **10:30 A.M.** **January 31, 2022**

The following modifications to the referenced project shall be incorporated into the original specifications and/or plans. Unless a change is specifically made by addendum, the specifications and/or plans as issued, shall govern.

Note: Vendors are required to acknowledge receipt of this addendum on the Louisiana Uniform Public Work Bid Form

Attachments:

- *Inquiries/Responses/Clarifications*
- *Bid Bond Sheet*
- *Attendees' List (Mandatory Pre-bid and Site Visit)*
- *Sign-in Sheet (Mandatory Pre-bid and Site Visit)*
- *Subsurface Exploration and Geotechnical Engineering Report*

Note: Bids shall be submitted to the Southern University Purchasing Department. On day of bid opening, you may be stopped at the security booth located on Harding Boulevard (Southern University). Please allow time to have your bid submitted timely.

Linda Antoine Date 1/24/2022
Linda Antoine-Director of Purchasing

modus INC.
ARCHITECTS & PLANNERS

ADDENDUM NO. 1

M.A. EDMOND LIVESTOCK ARENA and AGRICULTURAL MULTI-PURPOSE PARKING LOT PHASE 1
14600 SCENIC HWY
Southern University
Baton Rouge, LA

Architects Project No. M21-027

For Owner: Southern University and A&M College at Baton Rouge

Architect: **Modus Inc. Architects and Planners**
2300 Marengo street
New Orleans, LA. 70115

TO: All PLAN HOLDERS

Date Issued: January 24, 2022

This addendum modifies the original Solicitation Documents for the Project dated December 27, 2021 (Specifications/Drawings). The items in this addendum shall govern the work, taking precedence over previously issued specifications and drawings governing the items mentioned. Acknowledge receipt of this Addendum in the space provided on the Sealed Bid Form.

A. **REQUEST OF CLARIFICATION:**

1. **Specifications Section 31 2000 1.4 Owner to employ testing lab?**

   Contractor to employ testing agencies.

2. **Section 2.1 fill material is sand?**

   Fill material beyond the base is sand as noted.

3. **Specifications Section 32 1313 1.04 Owner to employ testing services?**

   Contractor to employ testing agencies.

4. Section 2.01B. Welded wire mesh to be used in flat sheets. According to supplier #4 rebar does not come in flat sheets unless specifically ordered, please confirm?

It is not the intent to have the #4 bars installed as sheets, they can be loose rods tied at the spacing noted.

5. Plan Sheet C1.0 refers to sheet c1.4 bid set does not contain sheet

Replace "C1.4" with "C1.3" in the note.

6. Plan Sheet C2.0 earthwork note 2 calls for pumped sand as a base, please confirm?

The earthwork spec does not call out sand as a base, the sand is called out as a fill.
The base is II base course as noted in detail 4/C2.0

7. Plan Sheet C2.0 section drawing 4 refers to geotechnical report please provide a copy?

Please see attached Geotechnical Report to be utilized for this development.

8. Plan Sheet C2.0 section drawing 4 states to use #4 rebar @12" o.c. each way, it seems excessive, please confirm, as well as it is not a shelf item it would be special order does the owner provide enough time for the order?

Minimum reinforcing steel in paving is governed by ACI 330. Construction and control joints are used to determine minimum steel.
Based on our experience, loose #4 bars are not a special order item.

9. Please confirm contract time and amount of liquidated damages.

90 calendar days with $150 per day in liquidated damages.

10. Pre-Bid Conference: Is this a tax free job?

Yes this is a tax free job.

11. The concrete paving notes referred to following Section 1019 of the LA DOTD STANDARD SPRECIFICATIONS for ROADS and Bridges 2016 edition-but the geotextile shown in the details of this C2.0 sheets are calling for a Mirafi 600x (Woven geotextile)-which is not a product allowed by the LA DOTD for this application-(Non-woven geotextile is required).

Follow DOTD requirements.

B. **ATTACHMENTS:**

1. **Pre-Bid Sign In Sheet**
2. **Geotechnical Report**

END OF ADDENDUM NO. 1

ADDENDUM # 1
BID BOND
FOR
SOUTHERN UNIVERSITY AND A&M COLLEGE

Date: _____

KNOW ALL MEN BY THESE PRESENTS:

That_____of_____, as

Principal, and_____, as Surety, are held and firmly bound unto the State of Louisiana, Southern University and A&M College (Obligee), in the full and just sum of five (5%) percent of the total amount of this proposal, including all alternates, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater that the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A - rating in the latest printing of the A. M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

_____

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

_____ _____

PRINCIPAL (BIDDER) SURETY

BY: _____ BY:_____

AUTHORIZED OFFICER-OWNER-PARTNER AGENT OR ATTORNEY-IN-FACT(SEAL)

PRE-BID/SITE VISIT SIGN-IN LIST
BID 10300-PARKING LOT-PHASE 1

70957
Manchac Contractors
3141 Myrtle Grove
Baton Rouge, LA 70817
225-303-1056
Dylan Pastorick

mike@manchaccontractors.com
jeremy@manchaccontractors.com

43536
ANR Construction
10245 Siegen Lane-Suite C
Baton Rouge, LA 70810
225-202-3978
Darlene Landry

paola@anr-construction.com
darlene@anr-construction.com

69770
Omega Foundation Services
1103 Highway 19
Slaughter, LA 70777
225-202-7448
Greg Flitter
225-202-7448

andrew@omega-foundations.com

59202
Stubbs NK Contractors, LLC
12800 Pendarvis Lane
Walker, LA 70785
225-954-4119
Larry M Pool, Jr.

mpool@stubbsnrcontractors.com

43263
Sienna Construction, LLC
Post Office Box 66316
Baton Rouge, LA 70896
225-456-5466
Robert White

bids@siennaconstruction.net

69570
Bridging the Gap, LLC
13507 Quail Grove Avenue
Baton Rouge, LA 70809
225-910-1121
Randy Crawford

jjmoore@eatel.net
rcrawford@btgsolution.com

PRE-BID/SITE VISIT SIGN-IN LIST
BID 10300-PARKING LOT-PHASE 1

49356
Kort's Construction Services, Inc.
2182 Manton Drive
Covington, LA 70433
985-898-0932
Charlie Gerkin
cgerkin@kortsconstructionservices.com

5693
Industrial Enterprises, Inc.
Post Office Box 15414
Baton Rouge, LA 70895
225-927-6541
Terry Smith
mburley@iebatonrouge.com
karen@iebatonrouge.com

54964
Honore Companies, LLC
6655 Van Gogh Avenue
Baton Rouge, LA 70806
225-281-2857
Dalton Honore
dhonore@builtbyhonore.com

31667
The Belltech Group, Inc.
3309 Kaliste Saloom
Lafayette, LA 70508
Pat Bellard
337-981-2268
btg.mike@lusfiber.net

9569
J. W. Grand, LLC
5940 Perkins Road
Baton Rouge, LA 70808
225-767-3724
Patrick Hollier
jason@jwgrand.com
patrick@jwgrand.com

PRE-BID/SITE VISIT SIGN-IN LIST
BID 10300-PARKING LOT-PHASE 1

60664
Capital Area Construction, LLC
4710 Cherrywood Street
Port Allen, LA 70767
225-439-9625
Sammy Louis — capitalarea3@gmail.com

34005
Harvey Honore Enterprises, LLC
10840 Highland Road
Baton Rouge, LA 70810
225-445-1721 — aaron@honoreenterprises.com
Aaron Honore — edelouise@cox.net

57409
Elite Waste & Construction Services LLC
Post Office Box 1970
Prairieville, LA 70769
225-348-5859
Chris Nkali — elitesanitation@gmail.com

43152
Deumite Construction, LLC
10849 Perkins Road
Baton Rouge, LA 70810
225-769-2948 — rgoudeau@deumite.com
Charles Albert — sdeumite@deumite.com

58037
The Luster Group
3255 Choctaw Drive-Suite D
Baton Rouge, LA 70805
225-329-6573
Floyd Luster, Jr. — fluster@thelustergroup.com

PRE-BID/SITE VISIT SIGN-IN LIST
BID 10300-PARKING LOT-PHASE 1

61167
Hendrick Construction
37283 Swamp Road
Prairieville, LA 70769
985-237-3882
Brent Stokes

brent@hcladevelopment.com
accounting@hcladevelopment.com

55276
Turner & Turner Contracting, LLC
3600 Jackson Street-Suite 110
Alexandria, LA 71303
318-290-3231
Al Henry Turner

turnerturnercontracting@gmail.com

SOUTHERN UNIVERSITY STAFF

Ervin Antoine
Ag Center
225-954-0464

ervin_antoine@suagcenter.com

Kestee Weir
Facility Services
225-771-6235

kestee_weir@subr.edu

ADDENDUM NUMBER 1
***SIGN-IN SHEET*-PARKING LOT-PHASE 1-BID NUMBER 10300**

PRE-BID & SITE-VISIT: JANUARY 14, 2022 @ 10:30 AM -BID NUMBE 10300
SOUTHERN UNIVERSITY AND A&M COLLEGE-AG CENTER
PRE-BID & SITE LOCATION: *M.A. EDMOND LIVESTOCK ARENA-14600 SCENIC HIGHWAY (HIGHWAY 61)*
NAME OF BID : *PARKING LOT PHASE 1 (M.A. EDMOND LIVESTOCK ARENA)*
PLEASE PRINT CLEARLY IN THE APPROPRIATE AREAS (IN INK ONLY)

COMPANY	REPRESENTATIVE (PLEASE PRINT)	ADDRESS (BOX#, STREET, CITY, STATE, ZIP)	EMAIL ADDRESS	PHONE & FAX NO.
Manchac Contractors ✓	Dylan Pastorick	3141 Myrtle Grove BR, LA, 70817	Jeremy@manchaccontractors.com	225-303-1056
ANR Construction ✓	Darlene Kindy	10245 Siegen Lane Suite C BR, LA 70810	darlene@anr-constructionllc.com	225-202-3978
Omega foundation services ✓	GREG FLITTER	1103 HWY 19 SLAUGHTER, LA	andrewb@omega-foundations.com	202-7448
STUBBS NK CONTRACTORS ✓	LARRY M. POOL JR	12800 PENDARVIS LN WALKER LA. 70785	MPOOL@STUBBSNKCONTRACTORS.com	(225) 954-4119
Sienna Construction LLC	Robert White	P.O BOX 66316 Baton Rouge LA 70896	Bids@SiennaConstruction.net	225-456-5466
Bridging the Gap, LLC	Randy Crawford	13507 Quail Grove Ave Baton Rouge LA 70809	rcrawford@BTGSolution.com	361-037-0543
Kort's Construction Services ✓	Charlie Gerkin	2182 Martin Dr. Covington, LA	Cgerkin@Kortsconstructionservices.com	(985) 898-0932
Industrial Enterprises I.E. Inc.	Terry Smith	P.O. Box 15414 BTR. LA 70895	MBurley@IEBatonRouge.com	225.927.6544
Honore Companies ✓	DALTON Honore	6055 Van Gogh Ave B.R. LA. 70806	dhonore@builtbyhonore.com	~~225~~ 225 281 2857

ADDENDUM NUMBER 1
***SIGN-IN SHEET*-PARKING LOT-PHASE 1-BID NUMBER 10300**

PRE-BID & SITE-VISIT: *JANUARY 14, 2022 @ 10:30 AM -BID NUMBE 10300*
SOUTHERN UNIVERSITY AND A&M COLLEGE-AG CENTER
PRE-BID & SITE LOCATION: *M.A. EDMOND LIVESTOCK ARENA-14600 SCENIC HIGHWAY (HIGHWAY 61)*
NAME OF BID *: PARKING LOT PHASE 1 (M.A. EDMOND LIVESTOCK ARENA)*
PLEASE PRINT CLEARLY IN THE APPROPRIATE AREAS (IN INK ONLY)

COMPANY	REPRESENTATIVE (PLEASE PRINT)	ADDRESS (BOX#, STREET, CITY, STATE, ZIP)	EMAIL ADDRESS	PHONE & FAX NO.
The BellTech Group ✓	Pat Bellard	3309 Haliste Saloom Rd Lafayette, La 70508	btg.mike@lusfiber.net	(337) 981-2268
J.W. GRAND LLC ✓	PATRICK HOLLIER	5440 PERKINS RD B.R. LA 70808	patrickej wgrand.com	225-767-3726
Capital Area Const. ✓	Sammy Louis	4710 Cherrywood St Port Allen, LA	Capitalarea3@gmail.com	225-439-9625
HARVEY HONORE ENTERPRISES LLC ✓	AARON HONORE	10840 Highland Rd. BR. LA. 70810	AARON@Honoreenterprises.com	(225) 445-1721
Elite Waste & Construction Service LLC ✓	Chris Nkadi	P.O Box 1970 Prairieville LA 70769	Elitesanitation@gmail.com	225 348.5859
Deumite Construction ✓	Charles Allard	Deumite Construction 10849 Perkins Road B.R. La.	rgoudeau@deumite.com	225769-2548
the LUSTER GROUP ✓	Floyd Luster Jr.	3255 Choctaw Dr, Suite D BR, LA 70805	fluster@thelustergroup.com	225-329-6573
Hendrick Const. ✓	Brent Stokes	37283 Swamp Rd.	brent@hcldevelopment.com	985-237-3882
KEITH WEIR III	SUBR		KEITH_WEIR@SUBR.EDU	225.771.6235

ADDENDUM NUMBER 1
***SIGN-IN SHEET*-PARKING LOT-PHASE 1-BID NUMBER 10300**

PRE-BID & SITE-VISIT: JANUARY 14, 2022 @ 10:30 AM -BID NUMBE 10300
SOUTHERN UNIVERSITY AND A&M COLLEGE-AG CENTER
PRE-BID & SITE LOCATION: *M.A. EDMOND LIVESTOCK ARENA-14600 SCENIC HIGHWAY (HIGHWAY 61)*
NAME OF BID *: PARKING LOT PHASE 1 (M.A. EDMOND LIVESTOCK ARENA)*
PLEASE PRINT CLEARLY IN THE APPROPRIATE AREAS (IN INK ONLY)

COMPANY	REPRESENTATIVE (PLEASE PRINT)	ADDRESS (BOX#, STREET, CITY, STATE, ZIP)	EMAIL ADDRESS	PHONE & FAX NO.
Southern Univ.	ERVIN Antoine	SU Ag center B.R. LA	ervin_antoine@suagcenter.com	225-954-1464

modus INC.
ARCHITECTS & PLANNERS

ADDENDUM NUMBER 1

***SIGN-IN SHEET*-PARKING LOT-PHASE 1-BID NUMBER 10300**

SIGN IN SHEET	Date: 1/14/21	Location: M.A. EDMOND LIVESTOCK ARENA	Project: SU AG PARKING LOT PHASE 1	
NAME	COMPANY	PHONE	EMAIL	CONTRACTOR LICENSE #
Dylan	Manchac	225-303-1056	jeremy@manchaccontractors.com	70957
Darlene Landry	ANR	225-202-3978	darlene@anr-construction.com	43536
Randy Crawford	Bridging The Gap LLC	361-237-0543	rcrawford@BTGsolution.com	69570
Charlie Gerkin	Kolt's Construction Services	(225) 362-8376	cgerkin@koltsconstructionservices.com	49356
Terry Smith	I.E. Inc.	225.927.6541	mbowley@iebatonrouge.com	5693
Pat Bellard	The Bell Tech Group	(337) 981-2268	btg.mike@usfiber.net	31667
Dalton Honore	Honore Companies	225 281 7857	dhonore@builtbyhonore.com	54964
Patrick Hollier	J.W. Grand, LLC	225-767-3724	patrick@jwgrand.com	9569
Sammy Lonis	Capital Area Const.	(225)439-9625	capitalarea3@gmail.com	60664
AL Turner	Turner & Turner Const.	318-290-3231	AL@Turnerbuilds.com	55296
Greg Flitter	Omega Fdn. Svcs.	202-7448	andrewb@omega-foundations.com	69770
[illegible]	STUBBS M/K Construction	225-954-4114	mpull@stubbsmkconstruction.com	59202

AARON HONORE Hanney Honore Enterprises, LLC 225-445-1721 AARON@Honoreenterprises.com 34005

modus INC.
ARCHITECTS & PLANNERS

ADDENDUM NUMBER 1

***SIGN-IN SHEET*-PARKING LOT-PHASE 1-BID NUMBER 10300**

SIGN IN SHEET	Date: 1/14/21	Location: M.A. EDMOND LIVESTOCK ARENA	Project: SU AG PARKING LOT PHASE 1	
NAME	COMPANY	PHONE	EMAIL	CONTRACTOR LICENSE #
Robert White	Sienna Construction	225 456-5466	Bids@Sienna Construction.net	43263
Chris Nkadi	Elite Waste & Construction	225-349-5859	Elite.Sanitation@gmail.com	~~570~~ ~~57409~~ 57409
Charles Albert	Delmite Const.	225-769-2948	rgoudeau@delmite.com	43152
Brent Stokes	Hendrich Const.	985-237-3482	brent@hcldevelopment.com	61167
Floyd Luster Jr.	The Luster Group	225-329-6573	fluster@thelustergroup.com	58037
Ervin Antoine	Southern Univ.	225-954-1464	ervin_antoine@agsucenter.com	

Premier GEOTECH AND TESTING, LLC

Subsurface Exploration and Geotechnical Engineering Report

Proposed Southern University Disaster Relief Mega Shelter
Baker, Louisiana
Premier File No.: 21-0275

Prepared for:

Facility, Planning & Control
Division of Administration
State of Louisiana
c/o Domain+Modus JV (Architect)

Attention: Mr. Sit L. Wong, AIA

Prepared by:

Premier Geotech and Testing, LLC
9434 Interline Avenue
Baton Rouge, Louisiana 70809
225-416-0700
www.premiergeotesting.com

Leigh Brister, E.I.
Geotechnical Project Manager

Brenda Novoa, P.E., MSCE
Staff Engineer

Premier GEOTECH AND TESTING, LLC

Table of Contents

INTRODUCTION

Premier Geotech and Testing, LLC (Premier) is pleased to present this Subsurface Exploration and Geotechnical Engineering Report for the proposed Southern University Disaster Relief Mega Shelter. Our services were performed in general accordance with the executed agreement between Premier and Domain Architecture, APAC, signed by Mr. Sit Wong (on behalf of Facility, Planning & Control – Division of Administration, State of Louisiana) on October 15, 2021.

PROJECT AND SITE DESCRIPTION

We understand that the proposed project will consist of design and construction of a new single-story, pre-engineered metal building with a mechanical mezzanine and associated paving areas. The proposed new structure will encompass approximately 110,000 square feet and will have a 20-foot eave height. It will be utilized for sheltering evacuees. The building will include sleeping, dining and shower/toilet areas. When not used for sheltering, it will be used for shows or fairs. The proposed pavement areas will include loading and drop off areas. The anticipated traffic will mainly consist of buses, small trucks and cars, with the occasional 18-wheeler. The proposed project site is located at the existing Southern University Agricultural Research and Extension Center in Baker, Louisiana. At the time of our field exploration, the site was a relatively flat open field with grass groundcover.

Premier drilled and sampled seven (7) soil borings to a maximum depth of about twenty-five (25) feet below existing site grades within the proposed building footprint and four (4) additional soil borings to a depth of about six (6) feet below existing site grades within the proposed pavement areas. The borings were sampled continuously to a depth of about ten (10) feet and on 5-foot centers thereafter.

The following table lists the structural loads and other features that are required for or are the design basis for the recommendations on this report:

STRUCTURAL LOAD/PROPERTY	REQUIREMENT/REPORT BASIS		
BUILDING		**R[1]**	**B[2]**
Maximum Column Loads	2.0 kips (Live)	☒	☐
Maximum Wall Loads	2.0 kips per foot	☐	☒
Maximum Floor Loads	100 psf (Live)	☒	☐
Settlement Tolerances	Less than one (1) inch	☐	☒
GRADING			
Anticipated Amount of Fill Material Required to Achieve Design Grade	Two (2) feet	☒	☐

Notes:
1. R = Requirement indicates specific design information was supplied.
2. B = Report Basis indicates specific design information was not supplied; therefore, this report is based on this

parameter assumption.

The geotechnical recommendations presented in this report are based on the available project information at the time of this report and the subsurface materials information obtained from the subsurface exploration performed for the project as described herein. If any of the information included in this report is incorrect, please inform Premier in writing so that we amend the recommendations presented in this report if appropriate and if desired by the Client. Premier will not be responsible for the implementation of its recommendations when it is not notified of changes in the project.

SITE CONDITIONS

Subsurface Conditions

The encountered subsurface soils generally consist of a silt layer from the ground surface to a depth of about two (2) feet over intermittent layers of lean and fat clays to a depth of about twenty-five (25) feet, the maximum depth explored. In addition, occasional sand/clayey sand layers were encountered within the clays in the borings performed on the east side of the site (B-1, B-2 and B-6) at depths ranging from eighteen (18) to twenty-three (23) feet below existing site grades.

The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The boring logs included in the Appendix should be reviewed for specific information at individual boring locations. These records include soil descriptions, stratifications, penetration resistances, samples' locations, and laboratory test data. The stratifications shown on the boring logs are approximate and represent the conditions at the actual boring locations only. Variations may occur and should be expected between test locations. The stratifications represent the approximate boundary between subsurface materials and the actual transition may be gradual. Water level information obtained (if any) during field operations is also shown on the boring logs. Samples not altered by laboratory testing will be retained for a period of thirty (30) days from the date on this report and then will be discarded.

Groundwater Conditions

Free groundwater was encountered at a depth of about fourteen (14) feet below existing site grades at the time of our field exploration. It should be noted that groundwater level fluctuations may occur due to seasonal and climatic variations, alteration of drainage patterns, land usage, and ground cover, and could affect excavation activities. We recommend the Contractor determine the actual groundwater levels at the time construction activities begin.

Presence of Expansive Soils

Field and laboratory test results indicate that the soils encountered at the site exhibit moderate shrink and swell potential. **A Potential Vertical Rise (PVR) value of about 0.83 inches was calculated using the TEX-124E method with an applied contact pressure of 100 psf and**

assuming an active zone of ten (10) feet. Therefore, and based on the subsurface materials encountered, mitigation of the site conditions will not be necessary to maintain the potential vertical movement to less than one (1) inch.

The estimated amount of vertical movement of a foundation or floor slab constructed on swelling clays is referred to as the Potential Vertical Rise (PVR). To reduce the potential for shrinkage and swelling of the site soils, it is important that consideration be given to reducing the potential for moisture changes of the site soils. As a minimum, positive drainage away from the new buildings should be provided. If positive drainage is not provided, water will pond around and/or below the structure and total and differential movements higher than the indicated in this report may occur.

FOUNDATION RECOMMENDATIONS

Our building foundation recommendations are presented in the following sections. We mainly considered the subsurface soil conditions encountered in the soil borings performed within the footprint of the proposed structure as well as our experience with similar soil conditions and the provided/assumed design requirements to develop the recommendations discussed herein.

Based on the information obtained from the soil borings, laboratory test results and provided/assumed design data, Premier determined a traditional shallow foundation system, consisting of square spread and continuous footings, is suitable to support the proposed structure provided the recommended allowable bearing capacity and estimated settlement is adequate.

Shallow Foundation Recommendations

Based on the provided/assumed structural loads and the subsurface soil conditions encountered in our test boring locations, the proposed structure may be supported on a shallow foundation system. **Square spread and continuous footings bearing at least 18 inches below finished grade, within properly compacted structural fill or stiff in-situ clay, may be designed for a net allowable bearing capacity of 1,900 pounds per square foot (psf) and 1,400 psf, respectively.** A minimum dimension of 24 inches for the square spread footing and 18 inches for the continuous footing should be used in the foundation design to reduce the possibility of a local bearing failure.

The foundation excavations should be observed by a representative of Premier prior to steel or concrete placement in order to assess the condition of the foundation materials is consistent with the materials discussed in this report. Soft or loose soil zones encountered at the bottom of the footing excavations should be removed and replaced with properly compacted structural fill as directed by the Geotechnical Engineer.

After opening, foundation excavations should be observed, and concrete placed as quickly as possible to avoid exposure of the foundation bottoms to wetting and drying. Surface run-off water

should be drained away from the excavations and not be allowed to pond. The foundation concrete should be placed during the same day the excavation is made. If it is required that foundation excavations be left open for more than one day, they should be protected to reduce evaporation or entry of moisture.

Estimated Settlement

We estimated the settlement behavior of shallow foundations based on the results of our laboratory testing and our experience with similar soil conditions. Settlement was estimated based on total sustained dead loads of 70% of the above recommended net allowable bearing pressures plus up to two (2) feet of fill material, using empirical correlations between Atterberg Limits and compressibility. A detailed settlement analyses was beyond the scope of our services.

Total settlement of individual isolated shallow footings with widths less than five (5) feet and continuous footings up to two (2) feet in width and placement of up to two (2) feet of fill material in accordance with the recommendations presented herein are expected to be on the order of 1.33 inches. However, we anticipate at least 20% of the estimated settlement to occur during construction. Therefore, post construction settlement is anticipated to be about 1-inch. All things being equal, differential settlements are expected to be about half of the total settlements.

Uplift Resistance

The uplift resistance of shallow spread footings formed in open excavations should be limited to the weight of the foundation concrete and the soil above it. For preliminary design purposes, the uplift resistance can be computed by using a total unit weight of 118 pcf for the structural fill placed and compacted above the footing and a unit weight of 150 pcf for the concrete. Concrete reinforcing steel should be properly sized to resist uplift forces. We recommend that a factor of safety of at least 1.5 be used when determining the allowable uplift resistance of spread footings.

The resistance to sliding of spread footings bearing in structural fill can be computed by multiplying the footing base contact area by a sliding friction factor of 0.35. Spread footings should be sized to resist overturning due to moment forces.

Floor Slab

The floor slab can be grade supported on naturally occurring stiff clay, or a minimum of 12 inches of properly compacted low plasticity structural fill. If soft or unstable soils (i.e., silt) are encountered before or during construction and/or proof rolling activities, these soils should be removed from the floor slab area and replaced with properly compacted structural fill material with a Liquid Limit (LL) less than 40 and a Plasticity Index (PI) between 12 and 22.

It is recommended that a minimum four (4) inch thick free-draining granular mat be placed beneath the floor slab to enhance drainage. The soil surface shall be graded to drain away from the building without low spots that can trap water prior to placing the granular drainage layer.

The precautions listed below should be followed for construction of slab-on-grade pads. These details may not reduce the amount of soil movement but are intended to reduce potential damage should some settlement of the supporting subgrade take place. Some increase in moisture content is inevitable as a result of site development and associated landscaping. However, extreme moisture content increases can be largely controlled by proper and responsible site drainage, building maintenance and irrigation practices.

- Cracking of slab-on-grade concrete is normal and should be expected. Cracking can occur not only as a result of heaving or compression of the supporting soil material, but also as a result of concrete curing stresses. The occurrence of concrete shrinkage crack, and problems associated with concrete curing may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement, finishing, and curing, and by the placement of crack control joints at frequent intervals, particularly where re-entrant slab corners occur. The American Concrete Institute (ACI) recommends a maximum panel size (in feet) equal to approximately three times the thickness of the slab (in inches) in both directions. For example, joints are recommended at a maximum spacing of twelve (12) feet based on having a four-inch slab. Premier also recommends that the slab be independent of the foundation walls. Using fiber reinforcement in the concrete can also control shrinkage cracking.
- Areas supporting slabs should be properly moisture conditioned and compacted. Backfill in all interior and exterior water and sewer line trenches should be carefully compacted to reduce the shear stress in the concrete extending over these areas.
- Exterior slabs should be isolated from the building. These slabs should be reinforced to function as independent units. Movement of these slabs should not be transmitted to the building foundation or superstructure.

Moisture Control

Polyethylene sheeting should be placed to act as a vapor retarder where the floor will be in contact with moisture sensitive equipment or products such as tile, wood, carpet, etc., as directed by the design engineer. The decision to locate and/or place the vapor retarder in direct contact with the slab or beneath the layer of granular fill should be made by the design engineer after considering the moisture sensitivity of subsequent floor finishes, anticipated project conditions, and the potential effects of slab curling and cracking.

PAVEMENT RECOMMENDATIONS

Pavement Sections

Actual anticipated traffic type and frequency was not known at the time of this report. However, the Client indicated that the average daily traffic (ADT) will mostly consist of buses, small trucks and cars with the occasional 18-wheeler. Premier assumed pavement-related design parameters that are considered typical for the existing soil types at the project site.

Specific design parameters considered in the pavement design are as follows:

Design Life	15 Years
CBR	3
Modulus of Subgrade Reactions, k	115 pci
Reliability	85%
Deviation	0.35 Rigid
Initial Serviceability	4.2
Terminal Serviceability	2.0
Drainage Coefficient	1.0 Pavement; 0.9 Base

With the aforementioned parameters, it is possible to use a typical "standard" pavement section consisting of the following:

USAGE	RIGID PAVEMENT (Concrete)
Pedestrian Vehicle Drives/Parking	5 inches of concrete over *10 inches Class II base course over proof rolled stable subgrade
Truck and Bus Drives/ Parking/Dumpster Location(s)	8 inches of concrete over *12 inches Class II base course over proof rolled stable subgrade
* See *Base and Sub-Base Recommendations* section below	

The pavement subgrade, subbase, base and pavement shall be prepared in accordance with the latest edition of the Louisiana Standard Specifications for Road and Bridges (LSSRB) and the recommendations provided in this report. The recommended pavement thicknesses presented are considered typical and minimum for the assumed parameters for this site. We understand that budgetary considerations sometimes warrant thinner pavement sections than those presented herein. However, the Client, the Owner, and the Project Designers should be aware that thinner pavement/base sections may result in increased maintenance costs and

lower than anticipated pavement life.

The use of recycled crushed concrete is an approved aggregate base alternative to crushed stone. The aggregate base shall meet the requirements of the latest edition of the LSSRB, Sections 1003.3.3.1 and 1003.3.2.

The base and subbase course shall be compacted to at least 95 percent of its maximum dry density near the optimum moisture content in accordance with ASTM D698, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3)).

Pavement materials may be placed after the subgrade or structural fill has been properly proof rolled or compacted, and fine-graded. These activities shall be accomplished following the LSSRB construction guidelines.

Proper finishing of concrete pavement requires the use of appropriate construction joints to reduce cracking. Construction joints shall be designed in accordance with the current Portland Cement Association and the American Concrete Institute guidelines. Joints should be sealed to reduce the potential for water infiltration into the supporting soils. The design of steel reinforcement should be in accordance with current accepted codes.

Water should not be allowed to pond behind curbs and saturate the base. In down grade areas, the granular base shall extend through the slope to provide an exit path for any water accumulating under the pavement.

*Base and Sub-Base Recommendations

Class II Base Course: Crushed Stone/Recycled Concrete/Blended Calcium Sulfate Aggregate Material

Properly graded crushed stone, recycled crushed concrete, or blended calcium sulfate meeting the requirements of Section 1003.03.1 and 1003.03.2 of the LSSRB should be utilized beneath the pavements where specified in the *Recommended Pavement Sections* table presented in this report. The aggregate base material should be placed in accordance with LADOTD Section 302 and compacted to at least 95 percent of the maximum dry density as determined by ASTM D698 using a smooth pad roller. Placement and compaction of the aggregate material should be near optimum moisture.

Unpaved Parking/Drive Areas

It is understood that that large, heavy-duty equipment and vehicles (i.e., buses and 18-wheelers) will be utilizing a portion of the project site that will be unpaved. As such, this portion of the site is designed for an equivalent heavy truck traffic including fully loaded 18-wheeler trucks with an average truck factor of about 1.75. Moreover, our scope of work did not include extensive

sampling and CBR testing of the existing subgrade or potential sources of imported fill for the specific purpose of a detailed pavement analysis. Instead, we have assumed pavement-related design parameters that are considered to be typical for the area soil types.

The principal geotechnical emphasis for an unpaved parking/drive area is to provide a uniform, continuous subgrade with a limestone base course. The required base course thickness for the unpaved parking/drive areas for this project was evaluated for the maximum anticipated moving loads indicated above. Other typical parameters considered for the design of unpaved parking/drive areas are provided below. If the actual anticipated number of ESALs is considerably different than the assumed number of ESALs, our office should be contacted for a re-evaluation of the base thickness.

Average Daily Traffic (**assumed**)	15
Design Life	15 Years
Truck Factor (ESALs/truck)	1.75
18-kip ESALs over Design Period	173,000
CBR	3
Modulus of Subgrade Reactions, k	110 psi/in
Drainage Coefficient	0.9
Layer Coefficients	0.14 Limestone Base

With these parameters, the unpaved parking/drive areas shall consist of the following:

UNPAVED PARKING/DRIVE AREAS	
Materials	**Minimum Thickness, Inches**
Compacted 610 Limestone Aggregate Base Course	10
Tensar BX 1200	Interface
Proof-rolled stabled subgrade	--

For unpaved parking/drive areas, the constructed base course over the proof-rolled, stable subgrade will have the greatest influence on the structure's performance. It is recommended that, at a minimum, 10 inches of crushed 610 limestone to be provided as base course and reinforced with Tensar Geogrid BX 1200, placed over the proof-rolled and stable subgrade. Geogrid reinforcement provides added support and evenly distributes the traffic loads through interlocking, reinforcement, confinement and separation of aggregate base course material and the subgrade materials. The crushed stone should be graded to gravity drain. It should also meet the requirements of LSSRB for 610 limestone and should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D 698 (Standard Proctor) within three (3) percent of

optimum moisture content. Please note that since the parking/drives areas are unpaved, it is anticipated that surface raveling or localized displacement of limestone would occur during vehicle/truck's turning activity and therefore the unpaved yard would require regular maintenance.

EARTHWORK RECOMMENDATIONS

Site Preparation

Subsurface soils across the project site disclosed silty soils in the upper two (2) feet. Therefore, caution should be used when performing construction activities in this area as this type of soils can become unstable with construction activities, especially during the wetter portions of the year. In addition, over excavation and replacement with properly compacted structural fill material of these near surface silty soils within the roadway alignments and extending to at least (1) foot behind the back of curb should be anticipated to pass a proof-roll. We recommend performing the over excavation activities prior to infrastructure construction and to be witnessed by a representative of Premier.

Premier recommends that all topsoil, stumps, vegetation, roots, soft, organic, or unsuitable soils in the construction areas be stripped in its entirety from the site and wasted or stockpiled for later use in non-structural areas. After stripping operations are completed, and prior to any fill placement, proof rolling of the subgrade is required as discussed later in this report. It should also be noted that it is not unusual for topsoil thickness to vary from the values stated in this report in the open field. Oftentimes, topsoil can be deeper in low-lying areas, where erosion, wind and precipitation can deposit this material. For estimating purposes, Premier anticipates an average stripping depth of approximately 6- to 8-inches, but this shall be verified by the Contractor(s) prior to bidding and construction. There may be areas of the site that require additional, or possibly less stripping for the reasons discussed above. A representative of Premier should determine and document the depth of removal at the time of construction.

The in-situ silts and clays encountered at this project site will undergo a significant loss of stability when construction activities are performed during wetter portions of the year. Premier anticipates that the soils in the project area can become easily disturbed if subjected to conventional rubber tire or narrow track-type equipment and excessive moisture. Soils that become disturbed would need to be excavated and replaced; however, this remedial excavation may expose progressively wetter soils with depth, thus compounding the problem condition. Thus, a normal approach to subgrade preparation may not be possible. Appropriate wide-track equipment selection should aid in minimizing potential disturbance. In addition, and for these reasons, it will be advantageous to perform earthwork and foundation construction activities during dry weather.

Proof Rolling

After stripping to the proposed subgrade level as required, the buildings and parking/drive areas should be proof-rolled with a 20-25-ton, half-loaded tandem axle dump truck or similar heavy

rubber-tired vehicle (typically with an axial load greater than nine (9) tons) and observed by a representative from Premier. Soils that are observed to rut or deflect greater than one (1) inch under the moving load should be undercut and replaced with properly compacted structural fill material or rendered stable by using a combination of lime/ fly ash/ kiln dust. The proof-rolling and undercutting activities should be witnessed by a representative of Premier and should be performed during a period of dry weather. Care should be taken during construction activities not to allow excessive drying or wetting of exposed soils. The subgrade soils should be scarified and compacted to at least 95% of the materials' Standard Proctor maximum dry density, in general accordance with ASTM procedures, to a depth of at least twelve (12) inches below existing subgrade.

When surficial fat clays are encountered while achieving compaction or passing a proof-roll, replacing this material with a low plasticity compacted soil or a dense positively drained graded crushed stone/concrete may be required. Alternatively, Class "C" fly ash or lime-treatment of the high plastic clay can be accomplished to reduce the plasticity index, improve workability, promote drying, and reduce shrink/swell potential. A representative of Premier's Geotechnical Engineer should observe the subgrade soils, perform plasticity index tests, and estimate the approximate extent of the exposed fat clays. If it is desirable to modify the fat clays with a commercially available Class "C" fly ash or lime product, Premier recommends the actual application percent be determined by conducting a laboratory Class "C" fly ash or lime series test. The Geotechnical Engineer's representative should observe the remediation procedures for compliance with the project plans and specifications.

Fill Material and Placement

After subgrade preparation and proof-rolling and observation have been completed, fill placement required to obtain finish grade may begin. A representative of Premier should be on-site to observe, test, and document all placement of the fill. If the fill is too dry, water should be uniformly applied and thoroughly mixed into the soil by disking or scarifying. Close moisture content control will be required to achieve the recommended degree of compaction. It should be noted that high plasticity clays are typically more difficult to compact and achieve the optimum moisture content during the placement of fill. The following table details the recommended specifications for fill placement, testing, etc.

Fill Material Testing Specifications

SPECIFICATION	REQUIREMENT
Lift Thickness	Maximum 8-inch loose lifts when compacted with large heavy compaction equipment. Maximum 6-inch loose lifts when compacted with lightweight compaction equipment (thinner lifts may be required in confined locations).
Density	Minimum of 95 percent of maximum dry density as defined by ASTM D 698 at all locations and depths.

Moisture	± 2 percent of optimum moisture as defined by ASTM D 698 for cohesive soils. For cohesionless soils with greater than 12 percent passing the US Standard No. 200 sieve, ± 3 percent of optimum moisture as defined above. Moisture requirement is waived for cohesionless soils with less than 12 percent passing the No. 200 sieve.
Density Testing Frequency	One test per 2,500 sf in building areas and one test per 5,000 sf in pavement areas or a minimum of 3 tests per lift in each area. One test per 200 feet of trench backfill with minimum of 2 tests per lift, or as required by local government agencies.

The edges of compacted fill should extend a minimum of five (5) feet beyond the building footprint, or a distance equal to the depth of fill beneath the footings, whichever is greater. The measurement should be taken from the outside edge of the footing to the toe of the excavation prior to sloping.

Structural Clay Fill

Structural clay fill materials placed beneath structural features or slabs should be free of organic or other deleterious materials and have a maximum particle size of less than three (3) inches. Structural clay fill soils are defined as having a liquid limit (LL) less than forty (40) and plasticity index (PI) between twelve (12) and twenty-two (22) and plots below the A-line on the plasticity chart, or as accepted by the Geotechnical Engineer of Record.

Utility Trench Backfill

Excavation for utility trenches shall be performed in accordance with OSHA regulations as stated in 29 CFR Part 1926. It should be noted that utility trench excavations have the potential to degrade the properties of adjacent fill materials. Utility trench walls that are allowed to move laterally can lead to reduced bearing capacity and increased settlement of adjacent structural elements and overlying slabs.

Backfill for utility trenches is as important as the original subgrade preparation or structural fill placed to support either a foundation or slab. Therefore, it is imperative that the backfill for utility trenches be placed to meet the project specifications for the structural fill for this project. Premier recommends that flowable fill or lean mix concrete be utilized for utility trench backfill. If on-site soils are placed as trench backfill, the backfill for the utility trenches should be placed in four (4) to six (6) inch loose lifts and compacted to a minimum of 95% of the maximum dry density achieved by the Standard Proctor test. The backfill soil should be moisture conditioned to be within 2% of the optimum moisture content as determined by the Standard Proctor test. Up to four (4) inches of bedding material placed directly under the pipes or conduits placed in the utility trench can be compacted to the 90% compaction criteria with respect to the Standard Proctor. Backfill of utility trenches should not be performed with water standing in the trench. If granular material is used for the backfill of the utility trench, the granular material should have a gradation that will filter protect the backfill material from the adjacent soils. If this gradation is not available, a geosynthetic non-

woven filter fabric should be used to reduce the potential for the migration of fines into the backfill material. Granular backfill material shall be compacted to meet the above compaction criteria. The clean granular backfill material should be compacted to achieve a relative density greater than 75% or as specified by the Geotechnical Engineer for the specific material used.

Excavations

In Federal Register, Volume 54, Number 209 (October 1989), the United States Department of Labor, Occupational Safety and Health Administration (OSHA) amended its "Construction Standards for Excavations, 29 CFR, part 1926, Subpart P". This document was issued to better enhance the safety of workers entering trenches or excavations. It is mandated by this federal regulation that excavations, whether they be utility trenches, basement excavation or footing excavations, be constructed in accordance with the new OSHA guidelines. It is Premier's understanding that these regulations are being strictly enforced and if they are not closely followed, the Owner and the Contractor could be liable for substantial penalties.

The Contractor is solely responsible for designing and constructing stable, temporary excavations and should shore, slope or bench the sides of the excavations as required to maintain stability of both the excavation sides and bottom. The Contractor's "responsible person", as defined in 29 CFR Part 1926, should evaluate the soil exposed in the excavations as part of the Contractor's safety procedures. In no case should slope height, slope inclination or excavation depth, including utility trench excavation depth, exceed those specified in local, state and federal safety regulations.

Premier is providing this information solely as a service to our Client. Premier does not and will not assume responsibility for construction site safety or the Contractor's or other parties' compliance with local, state and federal safety or other regulations.

REPORT LIMITATIONS

The concept of risk is an important aspect of the geotechnical evaluation. The primary reason for this is that the analytical methods used to develop geotechnical recommendations do not comprise an exact science. The analytical tools which Geotechnical Engineers use are generally empirical and must be used in conjunction with engineering judgment and experience. Therefore, the solutions and recommendations presented in the geotechnical evaluation should not be considered risk-free and, more importantly, are not a guarantee that the interaction between the soils and the proposed structure will perform as planned. The engineering recommendations presented in the preceding sections constitute Premier's professional estimate of those measures that are necessary for the proposed structure(s) to perform according to the proposed design based on the information generated and referenced during this evaluation, and Premier's experience in working with those conditions.

The recommendations submitted in this report are based on furnished project information by the design team and the subsurface information obtained from borings drilled by Premier. If there are

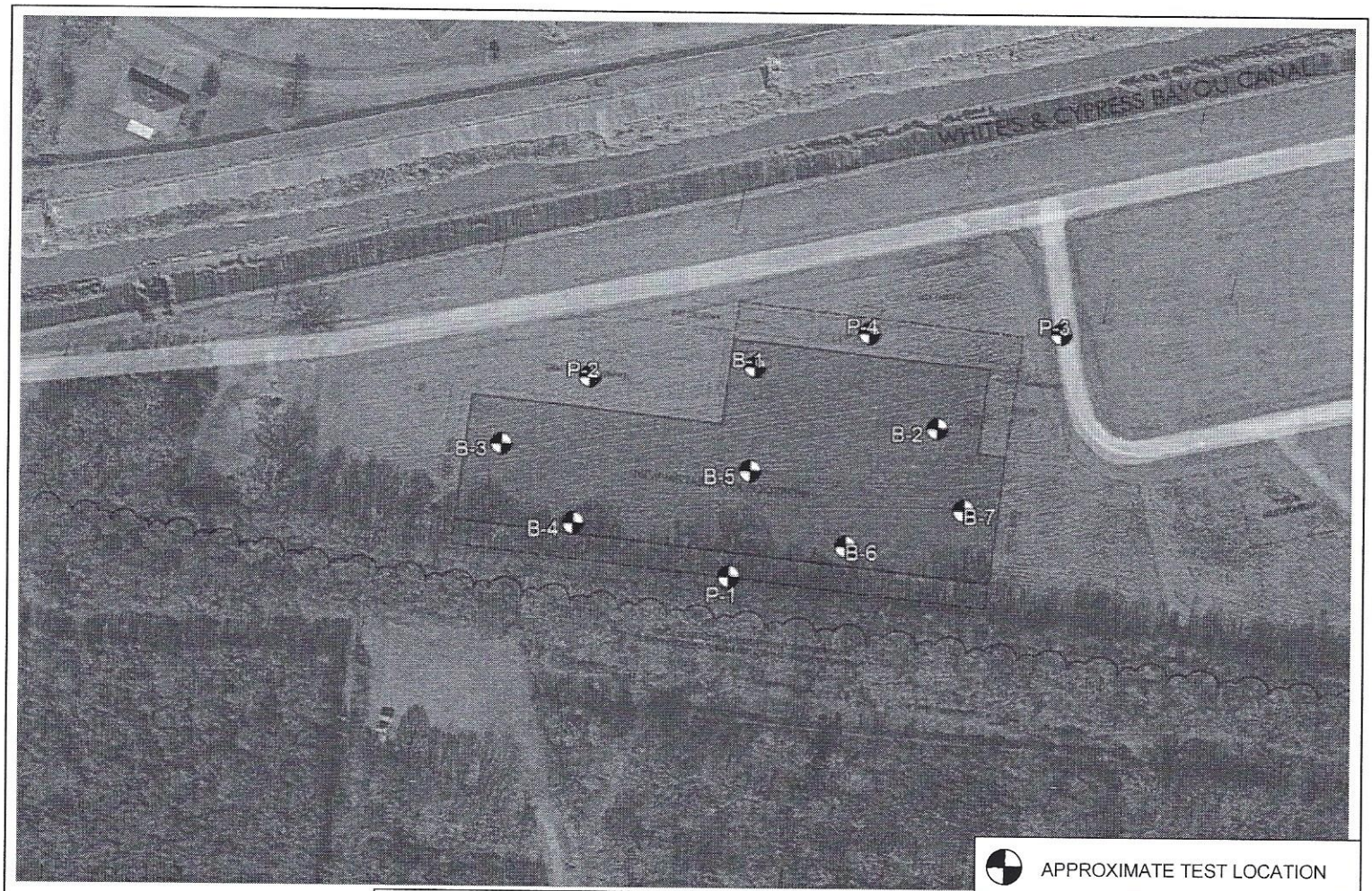
any revisions to the plans for this project, or if deviations from the subsurface conditions noted in this report are encountered during construction, Premier must be notified immediately to determine if changes in the foundation recommendations are required. If Premier is not notified in writing of such changes, Premier will not be responsible for the impact of those changes on the project.

The Geotechnical Engineer warrants that the findings, recommendations, specifications, or professional advice contained herein have been made in accordance with generally accepted professional geotechnical engineering practices in the local area. No other warranties are implied or expressed.

After the plans and specifications are complete, the Geotechnical Engineer should be retained and provided the opportunity to review the final design plans and specifications to check that our geotechnical engineering recommendations have been properly incorporated into the design documents.

The scope of Premier's services did not include any environmental assessment or investigation for the presence or absence or hazardous or toxic materials in the soil, groundwater, or surface water within or beyond the site studied. Any statements in this report regarding odors, staining of soils, or other unusual conditions observed are strictly for the information of our Client.

This report and the information/data provided have been prepared for the exclusive use of Facility, Planning & Control – Division of Administration, State of Louisiana and their design team for the specific application to the proposed Southern University Disaster Relief Shelter to be located in Baker, Louisiana. The information and data obtained and prepared (i.e., Instrument of Service) by Premier Geotech and Testing, LLC may not be used or relied on by any other entity, now or at any point in the future, without the express, written consent from Premier Geotech and Testing, LLC.



N

PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER
BAKER, LOUISIANA
PREMIER FILE NO.: 21-0275

Premier GEOTECH AND TESTING, LLC

TEST LOCATION PLAN

KEY TO SYMBOLS

Symbol Description

Strata symbols

 Silt

 High plasticity clay

 Low plasticity clay

 Clayey sand

 Poorly graded sand

Misc. Symbols

 Water table during drilling

● Triaxial Shear Strength

■ Unconfined Shear Strength

Soil Samplers

 Undisturbed thin wall Shelby tube

Notes:

1. Boring locations were located using handheld GPS technology.
2. These logs are subject to the limitations, conclusions, and recommendations in this report.
3. Results of tests conducted on samples recovered are reported on the logs.

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'50.61"N 91°12'18.80"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	SHEAR STRENGTH
0					Very Stiff, Gray and Light Gray SILT (ML) with fine sand, roots and trace clay		99.2		19.7	27	22	5	
					Light Gray and Tan FAT CLAY (CH) with silt and fine sand	2.0			22.5				
5					Light Gray and Tan LEAN CLAY (CL) with ferrous nodules	4.0			21.1				
					Stiff, Tan and Light Gray LEAN CLAY (CL) with fine sand and ferrous nodules/ stains		105.6		20.4	33	20	13	
10					Light Gray and Tan LEAN CLAY (CL) with ferrous nodules				18.7				
	▽				Light Gray SANDY FAT CLAY (CH)	13.0		68.6	14.2				
15													
					Light Gray CLAYEY SAND (SC)	18.0		47.5	13.9				
20													
				19	Medium Dense, Tan SAND (SP)	23.0			18.1				
25					Boring Terminated at 25 Feet	25.0							
30													
35													

SHEAR STRENGTH: □ Penetrometer ■ Unconfined ◇ Torvane ● Triaxial △ Field Vane ▲ Miniature Vane
TONS PER SQ FT: 0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 11/4/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 14'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-1
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'49.91"N 91°12'16.35"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	CLASSIFICATION: PASSING NO 200 SIEVE, %	CLASSIFICATION: WATER CONTENT, %	CLASSIFICATION: LIQUID LIMIT	CLASSIFICATION: PLASTIC LIMIT	CLASSIFICATION: PLASTICITY INDEX (PI)
0					Gray SILT (ML) with roots				20.5			
					Light Gray and Tan LEAN CLAY (CL) with ferrous nodules	2.0			21.6			
5					Very Stiff, Light Gray and Gray LEAN CLAY (CL) with ferrous stains		102.4		22.0	45	18	27
					Tan and Light Gray LEAN CLAY (CL) with fine sand				23.3			
					Tan and Light Gray LEAN CLAY (CL) with ferrous nodules				21.6			
10												
	▽				Stiff, Light Gray and Tan LEAN CLAY (CL) with fine sand and ferrous stains		105.4		20.1	32	14	18
15												
					Light Gray and Tan FAT CLAY (CH) with silt and sand	18.0			19.2			
20												
				18	Medium Dense, Tan CLAYEY SAND (SC) with silt	23.0		19.6	20.4			
25					Boring Terminated at 25 Feet	25.0						
30												
35												

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 11/4/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 14'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-2
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'49.70"N 91°12'22.18"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0					Gray and Brown SILT (ML) with trace clay				20.7			
					Stiff, Gray, Tan and Brown FAT CLAY (CH) with silt	2.0	98.7		23.2	52	17	35
5					Light Gray LEAN CLAY (CL) with ferrous stains	4.0			21.2			
					Light Gray and Tan LEAN CLAY (CL)				21.6			
					Stiff, Light Gray and Tan LEAN CLAY (CL) with ferrous stains/nodules		101.6		22.5	35	19	16
10												
					Light Gray and Tan LEAN CLAY (CL) with ferrous nodules				24.1			
15	▽											
					Light Gray and Tan LEAN CLAY (CL) with sand				18.7			
20												
					Light Gray and Tan LEAN CLAY (CL) with sand				18.3			
25					Boring Terminated at 25 Feet	25.0						
30												
35												

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 11/4/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 14'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-3
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'48.81"N 91°12'21.21"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0					Very Stiff, Light Gray and Tan SILT (ML) with clay, ferrous nodules and roots		104.5		15.4	26	22	4
					Gray and Brown LEAN CLAY (CL) with ferrous nodules	2.0			21.5			
5					Light Gray and Gray LEAN CLAY (CL) with fine sand				23.4			
					Light Gray and Tan LEAN CLAY (CL)				21.5			
					Tan and Light Gray LEAN CLAY (CL) with ferrous nodules				22.5			
10												
	▽				Stiff, Tan and Light Gray LEAN CLAY (CL) with ferrous stains		101.9		23.0	38	18	20
15												
					Light Gray and Tan LEAN CLAY (CL) with ferrous nodules				19.2			
20												
					Light Gray LEAN CLAY (CL) with fine sand				18.7			
25					Boring Terminated at 25 Feet	25.0						
30												
35												

CLASSIFICATION

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 11/4/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 14'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-4
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'49.40"N 91°12'18.85"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0					Gray SILT (ML) with roots and fine sand				18.7			
					Very Stiff, Gray, Light Gray and Tan FAT CLAY (CH) with silt and ferrous stains	2.0	98.6		24.1	55	21	34
5					Light Gray and Tan LEAN CLAY (CL) with ferrous stains	4.0			23.9			
					Stiff, Light Gray and Tan LEAN CLAY (CL) with ferrous nodules		102.8		23.5	41	19	22
					Tan and Light Gray LEAN CLAY (CL) with ferrous nodules				22.8			
10												
					Light Gray and Tan LEAN CLAY (CL) with ferrous nodules and sand				17.6			
15	▽											
					Tan and Light Gray LEAN CLAY (CL) with sand pockets and ferrous stains				17.0			
20												
					Stiff, Tan and Light Gray LEAN CLAY (CL)		105.3		21.9	30	18	12
25					Boring Terminated at 25 Feet	25.0						
30												
35												

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 11/4/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 14'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-5
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'48.57"N 91°12'17.57"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0					Stiff, Brown and Gray SILT (ML) with ferrous nodules		99.6					
					Brown LEAN CLAY (CL)	1.0			19.5	37	22	15
					Tan and Gray FAT CLAY (CH) with silt and ferrous nodules	2.0			24.4			
5					Tan and Light Gray LEAN CLAY (CL) with ferrous stains	4.0			23.9			
					Tan and Gray LEAN CLAY (CL) with ferrous stains				22.2			
					Gray and Tan LEAN CLAY (CL) with sand				17.6			
10												
					Light Gray and Tan SANDY LEAN CLAY (CL) with ferrous stains				17.0			
15	▽											
					Tan CLAYEY SAND (SC)	18.0		31.6	13.5			
20												
					Light Gray and Tan FAT CLAY (CH) with silt pockets	23.0			26.1			
25					Boring Terminated at 25 Feet	25.0						
30												
35												

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 11/4/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 14'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-6
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'48.98"N 91°12'15.99"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0					Brown FAT CLAY (CH) with silt, roots and ferrous nodules				18.7			
					Brown and Gray LEAN CLAY (CL) with ferrous nodules/stains	2.0			22.4			
5					Stiff, Tan and Light Gray LEAN CLAY (CL) with ferrous nodules		100.2		24.2	35	23	12
					Light Gray and Tan LEAN CLAY (CL) with fine sand and ferrous nodules				19.2			
					Medium, Tan and Light Gray SANDY LEAN CLAY (CL)		108.9		18.4	26	15	11
10												
	▽				Tan and Light Gray SANDY LEAN CLAY (CL)				15.0			
15												
					Light Gray and Tan LEAN CLAY (CL) with fine sand and ferrous nodules				19.2			
20												
					Light Gray LEAN CLAY (CL) with fine sand				19.4			
25					Boring Terminated at 25 Feet	25.0						
30												
35												

CLASSIFICATION

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:

DRILLED DATE: 11/5/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 25
WATER LEVEL: 14'
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING B-7
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'48.22"N 91°12'19.13"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)
0					Stiff, Gray and Light Gray SILT (ML)		102.5					
					Gray LEAN CLAY (CL) with ferrous nodules and roots	1.0			19.4	40	22	18
2					Light Gray and Tan LEAN CLAY (CL) with ferrous nodules				21.2			
4					Tan and Gray LEAN CLAY (CL) with ferrous nodules				23.8			
6					Boring Terminated at 6 Feet	6.0						
8												
10												
12												
14												

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:
GROUNDWATER NOT ENCOUNTERED DURING DRILLING OPERATIONS

DRILLED DATE: 11/5/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 6
WATER LEVEL: NE
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING P-1
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'50.48"N 91°12'21.00"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	PASSING NO 200 SIEVE, %	WATER CONTENT, %	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX (PI)	SHEAR STRENGTH
0					Gray SILT (ML) with roots, fine sand and trace clay				16.3				
2					Stiff, Light Gray and Tan LEAN CLAY (CL) with fine sand	2.0	101.8		22.1	46	19	27	
4					Tan and Light Gray LEAN CLAY (CL) with ferrous nodules				22.7				
6					Boring Terminated at 6 Feet	6.0							
8													
10													
12													
14													

SHEAR STRENGTH
□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane
TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:
GROUNDWATER NOT ENCOUNTERED DURING DRILLING OPERATIONS

DRILLED DATE: 11/5/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 6
WATER LEVEL: NE
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING P-2
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'51.01"N 91°12'14.70"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	CLASSIFICATION: PASSING NO 200 SIEVE, %	CLASSIFICATION: WATER CONTENT, %	CLASSIFICATION: LIQUID LIMIT	CLASSIFICATION: PLASTIC LIMIT	CLASSIFICATION: PLASTICITY INDEX (PI)
0					Stiff, Brown and Tan SILT (ML) with clay		96.1					
					Gray and Brown LEAN CLAY (CL) with ferrous stains	1.0			21.4	30	21	9
2					Light Gray and Tan LEAN CLAY (CL) with ferrous stains				22.0			
4					Light Gray and Tan LEAN CLAY (CL) with ferrous stains				23.2			
6					Boring Terminated at 6 Feet	6.0						
8												
10												
12												
14												

SHEAR STRENGTH

□ Penetrometer ■ Unconfined
◇ Torvane ● Triaxial
△ Field Vane ▲ Miniature Vane

TONS PER SQ FT
0.5 1 1.5 2 2.5

NOTES:
GROUNDWATER NOT ENCOUNTERED DURING DRILLING OPERATIONS

DRILLED DATE: 11/5/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 6
WATER LEVEL: NE
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING P-3
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE

PREMIER FILE# 21-0275

Premier GEOTECH AND TESTING, LLC

LOCATION: BAKER, LOUISIANA
COORDINATES: 30°34'51.01"N 91°12'17.27"W

SURFACE EL.: EXISTING GRADE

DEPTH, FT	WATER LEVEL	SYMBOL	SAMPLES	BLOWS PER FOOT	STRATUM DESCRIPTION	STRATUM DEPTH, FT	CLASSIFICATION: UNIT DRY WT, PCF	CLASSIFICATION: PASSING NO 200 SIEVE, %	CLASSIFICATION: WATER CONTENT, %	CLASSIFICATION: LIQUID LIMIT	CLASSIFICATION: PLASTIC LIMIT	CLASSIFICATION: PLASTICITY INDEX (PI)	SHEAR STRENGTH
0					Gray SILT (ML) with roots and trace clay				16.0				
2					Light Gray and Tan FAT CLAY (CH) with silt and ferrous stains	2.0			23.1				
4					Tan and Light Gray LEAN CLAY (CL)	4.0			21.1	49	21	28	
6					Boring Terminated at 6 Feet	6.0							
8													
10													
12													
14													

SHEAR STRENGTH: □ Penetrometer ■ Unconfined ◇ Torvane ● Triaxial △ Field Vane ▲ Miniature Vane
TONS PER SQ FT: 0.5 1 1.5 2 2.5

NOTES:
GROUNDWATER NOT ENCOUNTERED DURING DRILLING OPERATIONS

DRILLED DATE: 11/5/2021
DRILLER: PREMIER GEOTECH
LOGGER: W.W.
TOTAL DEPTH (Ft): 6
WATER LEVEL: NE
BACKFILL: NATIVE SOIL CUTTINGS

LOG OF BORING P-4
PROPOSED SOUTHERN UNIVERSITY
DISASTER RELIEF MEGA SHELTER

PLATE